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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/068,683	02/06/2002	Yuri Gerner	2001-1134.CIP	8779

7590

07/16/2003

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EXAMINER

STOCK JR, GORDON J

ART UNIT

PAPER NUMBER

2877

DATE MAILED: 07/16/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/068,683

Applicant(s)

GERNER ET AL.

Examiner

Gordon J Stock

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 April 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 5, 8-10, 12, 13 and 15-20 is/are rejected.
- 7) ☒ Claim(s) 4, 6, 7, 11 and 14 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 April 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

Claim Objections

1. **Claim 14** is objected to because of the following: the phrase, "said third layer," lacks antecedent basis. Appropriate correction is required.
2. The use of the trademarks Teflon AF, PEEK, and FEP has been noted in this application. They should be capitalized wherever they appear and be accompanied by the generic terminology.

Although the use of trademarks is permissible in patent applications, the proprietary nature of the marks should be respected and every effort made to prevent their use in any manner that might adversely affect their validity as trademarks.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. **Claims 1-3, 5, 8, 9, 12, 17, and 18** are rejected under 35 U.S.C. 102(e) as being anticipated by **Dourdeville et al. (6,188,813)**.

As for **claims 1-3, 8, 12**, Dourdeville discloses a flow cell comprising:

a cell structure having a first open channel therein with a first elongated tube including a radiant energy arresting portion, stainless steel portion, and a radiant energy propagation portion, Teflon AF portion, such first open channel forming a continuous passageway through said cell

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structure; a first end cap that is sealingly engageable with a first end of said cell structure, said first end cap having a first protrusion extending at least partially into such first open channel and a second open channel substantially aligned with such first open channel to extend the continuous passageway through said first end cap; a second end cap disposed on, and sealingly engageable with, a second end of said cell structure, said second end cap having a second protrusion extending at least partially into said first open channel, and third open channel substantially aligned with such first open channel so as to extend the continuous passageway through said second end cap; and ends forms a fluid seal in flow cell; stainless steel disposed along length of tube in surrounding relationship to Teflon AF portion and the stainless steel portion is disposed at respective end surfaces of said first tube (Figs. 2, 4, 5a, 5b; col. 3, lines 20-55; col. 6, lines 15-60; col. 8, lines 20-45; col. 9, lines 30-45; col. 11, lines 55-65).

As for **claim 5**, Dourdeville discloses the first tube comprises a perfluorinated copolymer, Teflon AF (col. 3, lines 20-25).

As for **claim 9**, Dourdeville discloses the stainless steel is spaced from inner surface of said first tube by at least two wavelengths of the radiant energy (col. 7, lines 35-40).

As for **claim 17**, Dourdeville discloses first tube is formed through a single-step extrusion process (col. 6, lines 50-57).

As for **claim 18**, Dourdeville discloses the following method: providing a cell body having an open channel extending therethrough; providing one or more layers of material lining to the open channel, at least one of said layers having a radiant energy arresting portion, stainless steel; attaching one or more end caps including protrusions extending therefrom, wherein said protrusions extend at least partially into open channel such that a fluid-tight seal is formed

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between said one or more material layers and said protrusions, said end caps further including one or more open channels in substantial alignment with such open channel; transporting sample fluid and radiant energy through such open channel such that the radiant energy passes through the sample fluid (Figs. 2, 4, 5a, 5b; col. 3, lines 20-55; col. 6, lines 15-60; col. 8, lines 20-45; col. 9, lines 30-45; col. 11, lines 55-65); receiving and interpreting the radiant energy that has passed through the sample fluid (col. 10, lines 60-67; col. 11, lines 1-10).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. **Claims 10 and 19** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Dourdeville et al. (6,188,813)**.

As for **claims 10 and 19**, see **claims 1 and 18** above. Dourdeville is silent concerning chemically bonding portions to tube. However, he teaches bonding the layers of the end interfaces to secure the components and to form a hydraulic seal (col. 9, lines 1-3). Therefore, it would be obvious to one skilled in the art at the time the invention was made to bond the layers of the flow cell in order to secure the components and to form a hydraulic seal.

7. **Claims 13 and 20** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Dourdeville et al. (6,188,813)** in view of **Lahijani (6,177,518)**.

As for **claims 13 and 20**, see **claims 1 and 18** above. Dourdeville is silent concerning the light arresting portion comprising carbon, a preferred material. It would have been obvious

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to one having ordinary skill in the art at the time the invention was made to have the light arresting portion comprise carbon, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. In re Leshin, 125 USPQ 416. In addition, Lahijani in a blends of fluoroplastics teaches that carbon may be used in fluoroplastics as a pigment (col. 4, lines 15-20). Therefore, it would be obvious to one skilled in the art at the time the invention was made to have the tube comprising Teflon AF comprise carbon for coloration.

8. **Claims 15-16** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Dourdeville et al. (6,188,813)** in view of **Garrett (6,542,231)**.

As for **claims 15-16**, see **claim 3** above. Dourdeville is silent concerning a predetermined gap volume adjustably formed. Garrett in a fiber-coupled liquid sample analyzer with liquid flow cell teaches having a gap volume to ensure laminar flow (col. 9, lines 2-15). Therefore, it would be obvious to one skilled in the art at the time the invention was made to have a predetermined gap volume adjustable to establish laminar flow of liquid into the channel. In addition, Garrett teaches determining a refractive index sensitivity that relates to a determined gap volume in order to standardize energy propagation in the flow cell depending on the indices of refraction of the fluid used (cols. 9-13). Therefore, it would be obvious to one skilled in the art at the time the invention was made to calibrate the gap volume via determining the refractive index sensitivity in order to standardize energy propagation in the flow cell.

Allowable Subject Matter

9. **Claims 4, 6, 7, 11, and 14** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims and rewritten to overcome any objections stated above.

As to **claim 4**, the prior art of record, taken alone or in combination, fails to disclose or render obvious in a flow cell “a second tube disposed substantially concentrically about said first tube, and a third tube disposed substantially concentrically around said second tube” in combination with the rest of the limitations of **claim 4, 6, 7, and 11**.

As to **claim 14**, the prior art of record, taken alone or in combination, fails to disclose or render obvious in a flow cell for transporting fluid in a radiant energy field “said protrusions of said first and second end caps are positioned to displace respective portions of said third layer” in combination with the rest of the limitations of **claim 14**.

Response to Arguments

10. Applicant’s arguments, see pages 9 and 10, filed April 18, 2003, with respect to the rejections under 35 U.S.C. 112, second paragraph, of previous claims 2-4, 9, and 18 in Paper No. 3 (the previous office action) in regards to the terms, “substantially” and “substantial” and “about” have been fully considered and are persuasive. The rejection of claims 2-4, 9, and 18 under 35 U.S.C. 112, second paragraph, in regards to the terms, “substantially” and “substantial” and “about” has been withdrawn. In addition, new ground(s) of rejection have been made. See above. Applicant's other arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

U.S. Patent 4,009,382 to Nath

12. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Fax/Telephone Numbers

If the applicant wishes to send a fax dealing with either a proposed amendment or a discussion with a phone interview, then the fax should:

- 1) Contain either a statement "DRAFT" or "PROPOSED AMENDMENT" on the fax cover sheet; and
- 2) Should be unsigned by the attorney or agent.

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This will ensure that it will not be entered into the case and will be forwarded to the examiner as quickly as possible.

Papers related to the application may be submitted to Group 2800 by Fax transmission. Papers should be faxed to Group 2800 via the PTO Fax machine located in Crystal Plaza 4. The form of such papers must conform to the notice published in the Official Gazette, 1096 OG 30 (November 15, 1989). The CP4 Fax Machine number is: (703) 308-7722

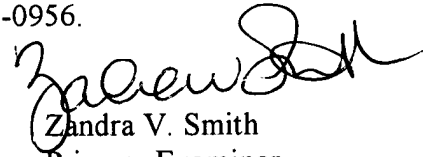
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gordon J. Stock whose telephone number is (703) 305-4787. The examiner can normally be reached on Monday-Friday, 10:00 a.m. - 6:30 p.m.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

gs

gs

July 9, 2003


Zandra V. Smith
Primary Examiner
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